

HUNTINGTON RESERVOIR



Introduction

Huntington Reservoir is in Huntington Canyon high on the east side of the Wasatch Plateau. It is an intermediate sized impoundment of a meadow in a glacial valley.

Characteristics and Morphometry

Lake elevation (meters / feet)	2748 / 9014
Surface area (hectares / acres)	47.75 / 118
Watershed area (hectares / acres)	1,155 / 2854
Volume (m ³ / acre-feet)	
capacity	6,907,600 / 5,600
conservation pool	1,110,150 / 900
Annual inflow (m ³ / acre-feet)	5,528,547 / 4482
Retention time (years)	<1
Drawdown (m ³ / acre-feet)	2,691,497 / 2,182
Depth (meters / feet)	
maximum	27.9 / 8.50
mean	6.79 / 22.2
Length (km / miles)	1.89 / 1.2
Width (km / miles)	.35 / .22
Shoreline (km / miles)	4.15 / 2.58

Huntington Reservoir should not be confused with Huntington Lake North, a reservoir immediately outside Huntington City. The reservoir became famous in 1988 when the well-preserved, 9,500 year old skeleton of a Columbian Mammoth was uncovered during reconstruction of the dam. The Huntington Mammoth and replicas have been on display at various museums around the state.

Location

County	Sanpete
Longitude / Latitude	111 16 03 / 39 35 24
USGS Map	Huntington Reservoir 1978
DeLorme's Atlas and Gazetteer™	Page 46 D-2
Cataloging Unit	San Rafael (14060009)

The reservoir was created in 1949 by the construction of an earth-fill dam. It was significantly enlarged in 1991 when the dam was raised 20 feet. The shoreline is owned by the Manti-La Sal National Forest and the Huntington-Cleveland Irrigation Company with unrestricted public access. Reservoir water is used for recreation and

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irrigation

with no changes anticipated. It receives little recreational

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use but is noted for its fishing and scenic beauty.

Recreation

Huntington Reservoir is directly accessible from U-31 which follows the shoreline for about a mile. The lake is 16 miles east of Fairview City and 32 miles northwest of Huntington City.

Although the area generally receives limited recreational usage, heavy use occurs on holiday weekends. Although fishing is the primary activity, boating, camping, swimming, Nordic skiing and snowmobiling are also popular with visitors.

Recreational facilities in the area are primitive. Visitors are required to pack out their own trash. There are Forest Service Campgrounds in lower in Huntington Canyon, on U-264, on the road to Joes Valley, and on Skyline Drive north of U-264. A parking area is provided at the dam site, and toilets are provided at a parking area at the Lake Guard Station (Miller Flat and Joes Valley access road).

Watershed Description

The reservoir is in an area of rolling ridges and valleys characteristic of the Wasatch Plateau. It collects water directly from the North Fork of Lake Canyon (the canyon the reservoir is located in), and from the South Fork of Lake Canyon via a short diversion canal. The canyons were likely glaciated during the last ice age.

The watershed high point (the top of the South Fork of Lake Canyon) is 3,152 m (10,340 ft) above sea level, thereby developing a complex slope of 10.3% to the reservoir. The average stream gradient above the reservoir is 4.2% (225 feet per mile).

The soil is of limestone origin and has good permeability and moderately slow erosion and runoff. Soil groupings are found in Appendix III.

The vegetation communities are comprised of pine, aspen, spruce-fir, oak and maple. The watershed receives 64 - 76 cm (25 - 30 inches) of precipitation annually with a frost-free season of 20 - 60 days at the reservoir.

Land use in the reservoir is designated as 100% multiple use forest lands, and is used for hunting, recreation and livestock grazing.

Limnological Assessment

The water quality of Huntington Reservoir is very good. It is considered to be moderately hard with a hardness concentration of 126 mg/L (CaCO₃). The only parameter that has exceeded State water quality standards for defined beneficial uses is phosphorus. The average

concentration of total phosphorus in the water column in 1992 was 24.3 but during June in the hypolimnion the concentration was 42 ug/L. Currently the only data existing for the lake was obtained in 1992. Additional monitoring will need to be done to effectively describe the conditions of the reservoir. The reservoir has been characterized as a

Limnological Data

Data averaged from STORET sites:
593208, 593209

Surface Data	1992
Trophic Status	M
Chlorophyll TSI	40.01
Secchi Depth TSI	53.88
Phosphorous TSI	45.63
Average TSI	46.50
Chlorophyll <i>a</i> (ug/L)	2.6
Transparency (m)	1.6
Total Phosphorous (ug/L)	18.0
pH	8.4
Total Susp. Solids (mg/L)	<3
Total Volatile Solids (mg/L)	1
Total Residual Solids (mg/L)	3
Temperature (°C / °f)	15/60
Conductivity (umhos.cm)	797

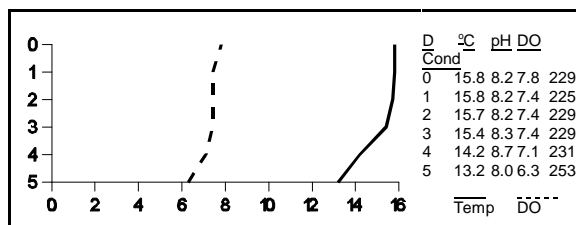
Water Column Data

Ammonia (mg/L)	0.04
Nitrate/Nitrite (mg/L)	0.03
Hardness (mg/L)	126
Alkalinity (mg/L)	123
Silica (mg/L)	1.2
Total Phosphorus (ug/L)	26

Miscellaneous Data

Limiting Nutrient	N
DO (Mg/l) at 75% depth	7.2
Stratification (m)	3-4
Depth at Deepest Site (m)	5

nitrogen limited system. TSI values indicate the reservoir is classified as mesotrophic. The reservoir in August, 1992 was stratified. A thermocline was developing at the 3-4 meter depth. The profile of August 10, 1992 indicates that there were no major concerns with the temperature or



dissolved oxygen concentrations throughout the water column.

The DWR began stocking the reservoir after it was enlarged, stocking 15,000 fingerling tiger trout (brook trout/brown trout hybrids) in 1992. The reservoir has not been treated to control rough fish competition, so original populations of Lake Fork fish may be found in the area. Before the dam was reconstructed, however, it was drained annually, so fish populations have never developed in the reservoir. It now has an approximately 20 foot deep conservation pool, which will significantly improve fish habitat.

Phytoplankton in the euphotic zone include the following taxa (in order of dominance).

Species	Cell Volume (mm ³ /liter)	% Density By Volume
<i>Sphaerocystis schroeteri</i>	7.923	98.37
Pennate diatoms	.044	0.55
<i>Ankyra judayi</i>	.039	0.49
Unknown spherical green alga	.027	0.35
<i>Chlamydomonas sp.</i>	.011	0.14
Centric diatoms	.009	0.49
Total	8.053	
Shannon-Weaver Index [H']	1	
Species Evenness	0.06	
Species Richness	0.22	

The phytoplankton community is dominated by green algae and diatoms. This is indicative of moderate productivity and good water quality.

Pollution Assessment

Nonpoint pollution sources include nutrient loading and sedimentation from grazing and litter and human wastes from recreation. About 1,000 sheep graze in the immediate vicinity of the reservoir for two weeks each year. Cattle also graze the area. No mining or logging takes place in the region.

There are no point pollution sources in the watershed.

Beneficial Use Classification

The state beneficial use classification for the waters of Cleveland Reservoir include: boating and similar recreation (excluding swimming) (2B), cold water game fish and organisms in their food chain (3A) and agricultural uses (4).

Information

Management Agencies

Manti-La Sal National Forest	637-2817
Six County Commissioners Organization	896-9222
Division of Wildlife Resources	538-4700
Division of Water Quality	538-6146

Reservoir Administrators

Huntington-Cleveland Irrigation Company	687-2505
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